



State of Utah

Department of
Environmental Quality

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DIVISION OF AIR QUALITY
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DAQE-IN0663005-04

August 26, 2004

Brad Boyter
Western Clay, Incorporated
P.O. Box 127
Aurora, Utah 84620

Dear Mr. Boyter:

Re: Intent to Approve: Modification of Approval Order DAQE# 709-94, by Increasing Production and Installing Additional Production Equipment, Sevier County, CDS SM; ATT; NSPS; TITLE V Minor Project Code: N0663-005

The attached document is the Intent to Approve (ITA) for the above-referenced project. ITAs are subject to public review. Any comments received shall be considered before an Approval Order is issued.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any technical questions you may have on this project to Mr. Tim De Julis. He may be reached at (801) 536-4012.

Sincerely,

Rusty Ruby, Manager
New Source Review Section

RR:TD:re

cc: Central Utah Public Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

**INTENT TO APPROVE: Modification of Approval Order
DAQE# 709-94, by Increasing Production and Installing
Additional Production Equipment**

**Prepared By: Tim De Julis, Engineer
(801) 536-4012
Email: tdejulis@utah.gov**

INTENT TO APPROVE NUMBER

DAQE-IN0663005-04

Date: August 26, 2004

**Western Clay Company
Source Contact
Brad Boyter
(435) 529-3281**

**Richard W. Sprott
Executive Secretary
Utah Air Quality Board**

Abstract

Western Clay, Inc. (WCI) owner and operator of the mineral processing plant located at Aurora, Sevier County, has requested permission to increase production to 160,000 tons per year. Toward this end, WCI will be increasing the annual plant-wide hours of operation to the maximum possible (8,760), adding a natural gas fueled, product dryer, a fabric filter baghouse, and other associated equipment such as a material feeder, material storage bins, a product extruder, a pin mill (agglomerator), and assorted conveyors. Furthermore, WCI seeks to substantially reduce their annual coal consumption, and to eliminate their ability to fuel various combustion devices with used oil. Sevier County is an attainment area of the National Ambient Air Quality Standards (NAAQS) for all pollutants. New Source Performance Standards (NSPS) apply to this source (40 CFR 60 – Subpart A, and Subpart OOO). National Emission Standards for Hazardous Air Pollutants (NESHAP) and Maximum Available Control Technology (MACT) regulations do not apply to this source. Title V of the 1990 Clean Air Act applies to this source.

The emissions, in tons per year, will change as follows: PM_{10} (- 14.02), NO_x (- 10.60), SO_2 (- 30.72), CO (- 4.69), VOC (+ 0.38), $HAPs$ (+ 0.19).

The changes in emissions will result in the following, in tons per year, potential to emit totals: PM_{10} = 20.45, NO_x = 6.03, SO_2 = 0.93, CO = 8.50, VOC = 0.54, $HAPs$ = 0.19.

The Notice of Intent (NOI) for the above-referenced project has been evaluated and has been found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an Approval Order (AO) by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-4. A notice of intent to approve will be published in the Richfield Reaper on September 1, 2004. During the public comment period the proposal and the evaluation of its impact on air quality will be available for both you and the public to review and comment. If anyone so requests a public hearing it will be held in accordance with UAC R307-401-4. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated.

Please review the proposed AO conditions during this period and make any comments you may have. The proposed conditions of the AO may be changed as a result of the comments received. Unless changed, the AO will be based upon the following conditions:

General Conditions:

1. This Approval Order (AO) applies to the following company:

Site Office

Western Clay, Inc.
100 South Highway 89
Aurora, Utah 84620

Corporate Office Location

Western Clay, Inc.
508 East Center Street
Aurora, Utah 84620

Phone Number: (435) 529-3281
Fax Number: (435) 529-3714

The equipment listed in this AO shall be operated at the following location:

100 South Highway 89, Aurora, Sevier County

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27
4,308.09 kilometers Northing, 420.19 kilometers Easting, Zone 12

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the Utah Administrative Code (UAC) Rule 307 (R307) and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.
3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.
4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401-1.
5. All records referenced in this AO or in applicable NSPS, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. Records shall be kept for the following minimum periods:
 - A. Emission inventories Five years from the due date of each emission statement or until the next inventory is due, whichever is longer.
 - B. All other records Two years
6. WCI shall install and operate the Bituma System equipment listed below in condition 8 and shall conduct its operations of the Aurora mineral processing plant in accordance with the terms and conditions of this AO, which was written pursuant to WCI's original Notice of Intent (NOI) submitted to the Division of Air Quality (DAQ) on January 23, 2004, their revised NOI submitted April 21, 2004 and additional information submitted to the DAQ on June 3, 2004, July 16, 2004, and August 11, 2004.
7. This AO shall replace the AO (DAQE-708-94) dated August 29, 1994.
8. The approved installations shall consist of the following equipment (or equivalent*):

RAYMOND SYSTEM

- A. One (1) – Jaw Crusher
Maximum Capacity: ***
Attached equipment: One (1) – Fabric filter baghouse (#19)
- B. One (1) – Material Crushing Mill
Identification: Hammer Mill
Maximum Capacity: ***
Attached equipment: One (1) – Fabric filter baghouse (#7)

- C. Two (2) – Material Drying Mills
 Identification: Raymond Mill #1, Raymond Mill #2
 Fuels: Coal, or Natural Gas – each
 Attached equipment: One (1) – Fabric filter baghouse – each (#8, #9)

- D. One (1) – Material Feed Silo
 Identification: Raymond Feed Hopper
 Attached equipment: One (1) – Fabric filter baghouse (#19)

- E. One (1) – Material Dryer
 Identification: Old Dryer
 Fuels: Coal, or Natural Gas
 Attached equipment: One (1) – Cyclonic separator, with one (1) attached fabric filter baghouse (#1)

- F. Six (6) – Material Storage Silos
 Identification: Raymond Storage Silo #1 through #6
 Capacity: 60 tons – each
 Attached equipment: Three (3) Fabric filter baghouses – one baghouse per two silos (#10, #11, #12)

- G. One (1) – Pneumatic conveyor
 Attached equipment: One (1) - Cyclonic separator, with one (1) attached fabric filter baghouse (#9)

- H. Assorted conveyors
 Attached equipment: One (1) – Fabric filter baghouse (#8)

- I. Three (3) – Truck Loading areas (within an enclosed building)

- J. Bagging Devices
 - 1) One (1) – four spout
 Attached equipment: Two (2) – Fabric filter baghouses (#3, #18)
 - 2) One (1) – one spout
 Attached equipment: One (1) – Fabric filter baghouse (#6)

WILLIAMS SYSTEM

- K. Material Processing Tower consisting of
 - 1) Two (2) – Screens
 - 2) Three (3) – Roll Crushers
 Maximum Capacity: ***
 - 3) One (1) – Fabric Filter Baghouse (#2)

- L. Material Storage Tower consisting of
 - 1) Four (4) – Silos, 240 ton capacity each
 - 2) Two (2) – Silos, 120 ton capacity each
 - 3) Two (2) – Screens, quad-deck
 - 4) One (1) – Loadout spout
 - 5) One (1) – Fabric Filter Baghouse (#2)

- M. Material Storage Tower consisting of
 - 1) Three (3) – Silos, 300 ton capacity
 - 2) Six (6) – Silos, 50 ton capacity
 - 3) Two (2) – Loadout spouts
 - 4) Five (5) – Fabric filter baghouses (#13, #14, #15, #16, #17)
- N. One (1) – Fluidized Bed Material Dryer
 - Identification: Fluid Bed Dryer
 - Fuel: Natural gas
 - Attached equipment: One (1) – Fabric filter baghouse (#4)
- O. One (1) – Agglomerator (vented to M)
- P. One (1) – Roll Crusher (vented to M)
 - Maximum Capacity: ***
- Q. One (1) – Feed Bin (vented to M)
- R. One (1) – Material Crushing Mill
 - Identification: Williams Mill #3
 - Maximum Capacity: ***
 - Attached equipment: One (1) – Cyclonic separator with two (2) attached fabric filter baghouses (#20, #21)
- S. One (1) – Bagging Device
 - Attached equipment: One (1) – Fabric filter baghouse (#22)
- T. One (1) – Pneumatic conveyor
 - Attached equipment: One (1) – Fabric filter baghouse (#5)
- U. Assorted Conveyors
- V. Assorted Storage Bins (located within a production building)

BITUMA SYSTEM

- W. One (1) – Material Dryer
 - Identification: Rotary Dryer
 - Fuel: Natural gas
 - Attached equipment: One (1) – Fabric filter baghouse (#23)
- X. One (1) – Extruder
- Y. One (1) – Pin Mill Agglomerator
- Z. Two (2) – Screens
 - Identification: Bituma Granular Screen #1, Bituma Granular Screen #2
 - Attached equipment: One (1) – Fabric filter baghouse – each (#23)

- AA. Assorted Conveyors
- BB. Assorted Storage Bins (located within enclosed production building)

MISCELLANEOUS

**

- CC. Various off-highway equipment items
- DD. Storage Tanks
 - 1) Diesel, 1,000 gallons
 - 2) Diesel, 500 gallons
 - 3) Propane, 1,000 gallons

* Equivalency shall be determined by the Executive Secretary.

** This equipment is listed for informational purposes only.

*** All crushing equipment listed above is fixed as defined in 40 CFR 60.671, each with a maximum capacity greater than 10 tons per hour (clay materials processing, 40 CFR 60.670 (c) (3)). All crushers and attached equipment items (screen, conveyor, bagging, storage bin, enclosed truck or rail car loading station, and fabric filter baghouse) are then subject to the opacity and emission standards contained in 40 CFR 60 Subpart OOO.

The various cyclonic separators, and baghouses (as numbered) attached to equipment as shown above shall control air emissions from the indicated equipment items, or process streams. All exhaust air from these equipment items, or processes streams shall be routed through the identified control devices before being vented to the atmosphere.

Each product bin's load out point shall have an evacuated pickup controlled by a baghouse. The baghouse shall control the emissions from the vent hatches of the transport vehicle's compartments as they are being filled.

9. WCI shall notify the Executive Secretary in writing when the installation of the Bituma System equipment listed in Condition #8-W through #8-BB has been completed and is operational, as an initial compliance inspection is required. To insure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If construction and/or installation has not been completed within eighteen months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO in accordance with R307-401-11.

Limitations and Tests Procedures

10. A manometer, or a magnehelic pressure gauge shall be installed to measure the differential pressure across the fabric filters in each of the baghouses listed in condition #8. Static pressure differential across the fabric filters shall be between 1.5 to 6 inches of water column. The pressure gauge shall be located such that an inspector /operator can safely read the indicator at any time. The reading shall be accurate to within plus or minus 1.0 inches water column. The instrument shall be calibrated according to the manufactures

instructions at least once every 12 months. Intermittent recording of the readings is required on a once per operational day basis.

11. Visible emissions from the following emission points shall not exceed the following values:
 - A. All baghouse exhaust stacks – 7% opacity
 - B. All process enclosures – 7% opacity
 - C. All unenclosed screens/grizzlies – 10% opacity
 - D. All conveyor transfer points – 10% opacity
 - E. All other points - 20% opacity

Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.

For sources that are subject to NSPS, opacity shall be determined by conducting observations in accordance with 40 CFR 60.11(b) and 40 CFR 60, Appendix A, Method 9.

12. The following limits shall not be exceeded:
 - A. 160,000 tons of processed mineral product produced per rolling 12-month period
 - B. 130 tons of coal consumed per rolling 12-month period

To determine compliance with a rolling 12-month total the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of consumption, and production shall be kept for all periods when the plant is in operation. Production shall be determined by examination of the various materials billing, or shipping records. Consumption shall be determined by examination of fuel supplier billing records. The records of consumption, and production shall be kept on a daily basis.

13. Emergency generators shall be used for electricity producing operation only during the periods when electric power from the public utilities to WCI's Aurora mineral processing plant is interrupted, or for regular maintenance of the generators. Records documenting generator usage shall be kept in a log and they shall show the date the generator was used, the duration in hours of the generator usage, and the reason for each generator usage

Roads and Fugitive Dust

14. WCI shall abide by a fugitive dust control plan acceptable to the Executive Secretary for control of all dust sources associated with the Name of project. WCI shall submit a fugitive dust control plan to the Executive Secretary, attention: Compliance Section, for approval within 30 days of the date of this AO.
15. The facility shall abide by all applicable requirements of R307-205 for Fugitive Emission and Fugitive Dust sources.
16. All unpaved roads and other unpaved operational areas that are used by mobile equipment shall be water sprayed and/or chemically treated to control fugitive dust. The application

of water or chemical treatment shall be used. Treatment shall be of sufficient frequency and quantity to maintain the surface material in a damp/moist condition unless it is below freezing. The opacity shall not exceed 20% during all times the areas are in use. If chemical treatment is to be used, the plan must be approved by the Executive Secretary. Records of water and/or chemical treatment shall be kept for all periods when the plant is in operation. The records shall include the following items:

- A. Date
 - B. Number of treatments made, dilution ratio, and quantity
 - C. Rainfall received, if any, and approximate amount
 - D. Time of day treatments were made
 - E. Records of temperature if the temperature is below freezing.
17. The in-plant haul road shall be paved and shall be periodically swept or sprayed clean as conditions warrant, or as determined necessary by the Executive Secretary. Records of cleaning paved roads shall be kept for periods the plant is in operation.
18. The haul road shall not exceed 0.20 miles in length and the vehicle speed along the haul road shall not exceed 15 miles per hour.

These limitations shall not be exceeded. The vehicle speed on the haul road speed shall be posted, at a minimum, on site at the beginning of the haul road so that it is clearly visible from the haul road.

19. Water sprays, chemical dust suppression sprays, or other approved emission control technology shall be installed at the following points to control fugitive emissions:
- A. All crushers
 - B. All screens
 - C. All conveyor transfer points

The emission control technology shall operate whenever dry conditions warrant, or as determined necessary by the Executive Secretary.

20. The storage piles shall be watered to minimize generation of fugitive dusts, as dry conditions warrant or as determined necessary by the Executive Secretary. Records of water and/or chemical treatment shall be kept for all periods when the plant is in operation.

Fuels

21. The owner/operator shall use natural gas as a primary fuel, and blended coal as a backup fuel in the material dryers listed in conditions #8-C, and #8-E.
22. The owner/operator shall use only natural gas as fuel in the material dryers listed in conditions #8-N, #8-R, and #8-W.
23. The sulfur content of any coal, or mixture of coals shall not exceed:

1.0 pound per million gross Btu heat input

A representative sample shall be obtained and tested for each 24 hours of combined operation (all units) with coal, or mixture of coals as fuel. A USEPA approved method test shall determine the sulfur content. Certification of coal fuels shall be either by WCI's own testing, or test reports from the individual fuel marketer. Other coal fuel use provisions shall be as per R307-307-203.

24. The sulfur content of any fuel oil (diesel) burned shall not exceed:

0.5 percent by weight for all fuel oils consumed

ASTM Method D-4294-89, or USEPA approved equivalent shall determine the sulfur content. Certification of fuel oils shall be either by WCI's own testing or test reports from the individual fuel marketer. Other fuel oil use provisions shall be as per R307-307-203.

Federal Limitations and Requirements

25. In addition to the requirements of this AO, all applicable provisions of 40 CFR 60, New Source Performance Standards (NSPS) Subpart A, 40 CFR 60.1 to 60.18 (General Conditions), and 40 CFR 60.670 to 60.676 (Standards of Performance for Non-metallic Mineral Processing Plants) apply to this installation.

Records & Miscellaneous

26. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this Approval Order including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded.
27. The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring.
28. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the Division of Air Quality. The Utah Administrative Code R307 rules used by DAQ, the Notice of Intent (NOI) guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:

<http://www.airquality.utah.gov/>

The annual emissions estimations below include point source, fugitive dust, and road dust, and do not include fugitive emissions, tail pipe emissions, or grandfathered emissions. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The estimated allowable emissions for WCI's Aurora mineral processing plant are currently calculated at the following values:

	<u>Pollutant</u>	<u>Tons/yr</u>
A.	PM ₁₀	20.45
B.	NO _x	6.03
C.	SO ₂	0.93
D.	CO	8.50
E.	VOC	0.54
F.	HAPs	
	Total HAPs	0.19

The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final Approval Order.

Sincerely,

Rusty Ruby, Manager
New Source Review Section